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## County of Allegheny

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November 30, 1970

Mr. Richard Bernabei Department of Classics Queen's University Kingston, Ontario

Dear Mr. Bernabei:

In response to your letter and enclosure of November 3, 1970, and the subsequent note of November 7, 1970, I should like to make the following brief observations.

(1) Your argument is based upon frontal distribution of lead fragments seen on certain X-rays. Although there is reference to other X-rays, no mention is made as to whether or not these other X-rays also show the same small particles.

Something to be checked into very carefully is the possibility of an artifact produced during the process of development of the X-ray films.

(2) The thrust of your argument is mainly based on complete and total fragmentation of the bullet on entry. Bullets that would behave in this fashion are rarely used inasmuch as they would probably fragment to very small pieces upon striking soft tissue (and certainly upon striking bone), and thus would do little or no damage internally.

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If such a bullet had been used, the fragments would have spread for the most part at the surface of initial contact. Thus, in this case, if there had been a frontal shot, the bone might have been driven in, but the distribution of the minute fragments would be primarily on the outside of the skull and not on the inside. A more likely explanation for these radiographically evident fragments, if indeed they do represent lead, might be that they are particles from a bullet that entered the skull posteriorly and then fragmented after striking the lateral and frontal portions of the skull.

(3) The use of a soft gelatin block to determine the results of a bullet striking the skull is not valid in my opinion. Fragmented particles could penetrate gelatin but most probably would not penetrate bone.

With regard to Hoch's theories, the only comment that I believe to be necessary is that melons, no matter how prepared, etc., cannot be considered as a reasonable facsimile of a human skull, particularly one resting on a living person's shoulders!

I am sorry that I cannot be of more positive assistance and encouragement. It may be that I and my criminalist are wrong and that you are right, and I certainly stand ready to be corrected and convinced if that be true.

In any event, I should like to wish you well in your research projects and objectives. We need a breakthrough if we ever want to accomplish anything, and basic research like yours will be most important in reaching this goal.

With kind regards.

Sincerely

Cyril H. Wecht, M.D., J.D.

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